

***Acacia stellaticeps* (Fabaceae: Mimosoideae), a new species  
from the Pilbara, Western Australia, to Tanami, Northern Territory**

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**Abstract**

Kodela, P.G., Tindale, M.D. and Keith, D.A. *Acacia stellaticeps* (Fabaceae: Mimosoideae), a new species from the Pilbara, Western Australia, to Tanami, Northern Territory. *Nuytsia* 13(3): 483–486 (2001). *Acacia stellaticeps* Kodela, Tindale & D. Keith, a new species of *Acacia* section *Plurinerves* (Benth.) Maiden & Betche from Western Australia and the Northern Territory, is described and illustrated.

**Introduction**

*Acacia stellaticeps* is a new species of *Acacia* section *Plurinerves* (Benth.) Maiden & Betche (Fabaceae: Mimosoideae) from Western Australia and the Northern Territory. It was previously confused with *A. translucens* A. Cunn. ex Hook. and belongs to the informal '*A. stigmatophylla* group' (see Tindale 1980). *Acacia stellaticeps* is conspecific with *A. translucens* var. *humilis*, however the specific epithet *humilis* could not be used for this new species as it is already occupied by *A. humilis* Schlect., *Linnaea* 12: 567 (1838).

**New species**

***Acacia stellaticeps* Kodela, Tindale & D. Keith, *sp. nov.***

*Acacia stellaticeps* Kodela, Tindale & D. Keith differt praecipue ab *A. translucens* in capitulo florum gemmis prominentibus late effusis magnis, petalis striatis et phyllodiis mucrone plus minusve erecto gongylodo vel conico.

*Typus*: c. 19 km south-south-east of Sturt Creek on Tanami Track, Western Australia, 14 July 1974, A.C. Beauglehole 47444 & G.W. Carr 3666 (*holo*: NSW; *iso*: DNA, MEL *n.v.*, PERTH *n.v.*).

*Acacia translucens* var. *humilis* Benth., *London J. Bot.* 1: 364 (1842). Type: Bay of Rest, north-west coast, Western Australia, February 1818, A. Cunningham 115 (holo: K, photo NSW).

Rounded or flat-topped, glabrous, resinous *shrub* to 2 m high and to 3 m wide, often growing as a low spreading, dense shrub. *Bark* smooth, later splitting irregularly (fissured), grey or dark grey. *Branchlets* angular towards apices, pale green, brown or yellowish; ridges resin-crenulated. *Phyllodes* elliptic-obovate to narrowly elliptic-obovate or sometimes semi-orbicular, oblique,  $\pm$  straight to slightly curved and often slightly sigmoid or asymmetrical (the upper margin usually more rounded convex than the slightly convex to shallowly concave lower margin), (0.5)0.8–2(2.5) cm long, (3)4–10(14) mm wide, rigid, often subglaucous but bright green when young, finely longitudinally wrinkled when dry, usually the midvein and often one lateral vein either side faintly visible but often not reaching the apex, the minor veins obscure or not evident, with minor anastomosing sometimes visible, the apex acute to broadly obtuse with a small knob-like mucro; *basal gland* minute, to 2 mm above pulvinus; *pulvinus* to c. 1 mm long. *Inflorescences* simple, single in axils of phyllodes; *peduncles* 5–30 mm long; *heads* globular, (5)7–11(15) mm diam., 7–25(35)-flowered, golden; *bracteoles* to 1.1 mm long, with a  $\pm$  peltate, shortly  $\pm$ triangular lamina to 0.6 mm wide, or appearing  $\pm$  spatulate; *buds* spreading widely, sometimes smaller and more compact in eastern part of distribution range. *Flowers* 5-merous; *calyx* cupular, 0.7–1.1 mm long, barely dissected, often scurfy at apices; *corolla* usually three or more times longer than calyx (rarely about twice as long), (1.5)2.4–3.5 mm long, dissected by 1/2–2/3, the petals striated, reddish tinged inside, especially towards the thickened, acute apex; *ovary* sparsely to densely covered with short, white hairs. *Pods* erect, very narrowly elliptic to linear or narrowly oblanceolate to linear-oblanceolate, basally tapered,  $\pm$  straight-sided or sometimes variably indented between some seeds, flat, mostly 2.5–7 (10) cm long, 5–10 mm wide, thinly woody, scurfy, obliquely striate, with slightly thickened margins, opening elastically from apex (each side often curling back). *Seeds* oblique, oblong- to narrowly oblong-elliptic, 4–6 mm long, light to dark brown; *pleurogram* with pale halo; *areole* open, slightly depressed; *funicle-aril* narrowly conical. (Figure 1)

*Selected specimens examined* (typical variant). WESTERN AUSTRALIA: 770.3 miles [1235 km] on North West Coastal Highway, A.M. Ashby 4036 (AD, PERTH); Great Sandy Desert, E end of Lake Auld, J.S. Beard 3237 (PERTH); Port Hedland, J.S. Beard 4000 (NSW); Finucane Island, B. Carr B6 (NSW, PERTH); 13 km N of Lyndon River, H. Demarz 7650 (PERTH); Roebourne, Apr. 1901, L. Diels Herb. W.V. Fitzgerald (NSW); 6 miles [9.7 km] N of Roebourne, C.A. Gardner 6342 (PERTH); Telfer Mining Centre, E.M. Goble-Garratt 24 (PERTH); 70 km W from Western Australian border on Tanami Track, D. Keith & B. Pellow 133 (NSW, PERTH, SYD); bottom of Wolf Creek Crater, D. Keith & B. Pellow 154 (NSW, PERTH, SYD); Cape Bossut, K.F. Kenneally 6308 (PERTH); 'Nita', SW of Broome, F. Lullfitz 6222 & 6222a (NSW); near Well 24, Canning Stock Route, B.R. Maslin 2269 (CANB, K, MEL, PERTH); 2.5 km N of Exmouth Gulf homestead, B.R. Maslin 4759 (PERTH); 63.5 km N of Sandfire Roadhouse on Great Northern Highway, B.R. Maslin 4880 (PERTH); 60 km N of Minilya Roadhouse on the North West Coastal Highway, A.A. Mitchell 1316 (NSW, PERTH); The Pilbara, near Wickham, I.V. Newman 708 (NSW); Great Northern Highway, 225 miles [360 km] S of Broome, J. Olsen 511 (NSW); 2 km N of La Grange Mission turnoff, B. Pellow 229 (NSW, PERTH, SYD); Um [near] Roebourne, E. Pritzel 280 (NSW).

*Selected specimens examined* (small-flowered variant). WESTERN AUSTRALIA: Wolf Creek Crater, A.S. George 15333 (NT, PERTH); Djaluwon Creek, near S end of Lake Gregory, A.S. George 15424 (NT, PERTH).

NORTHERN TERRITORY: 20.2 miles [32.5 km] NW of The Granites, 3 May 1958, G. Chippendale s.n. (NSW, NT); 183 miles [293 km] from Yuendumu towards Rabbit Flat, C.H. Gittins 2286 (NSW);

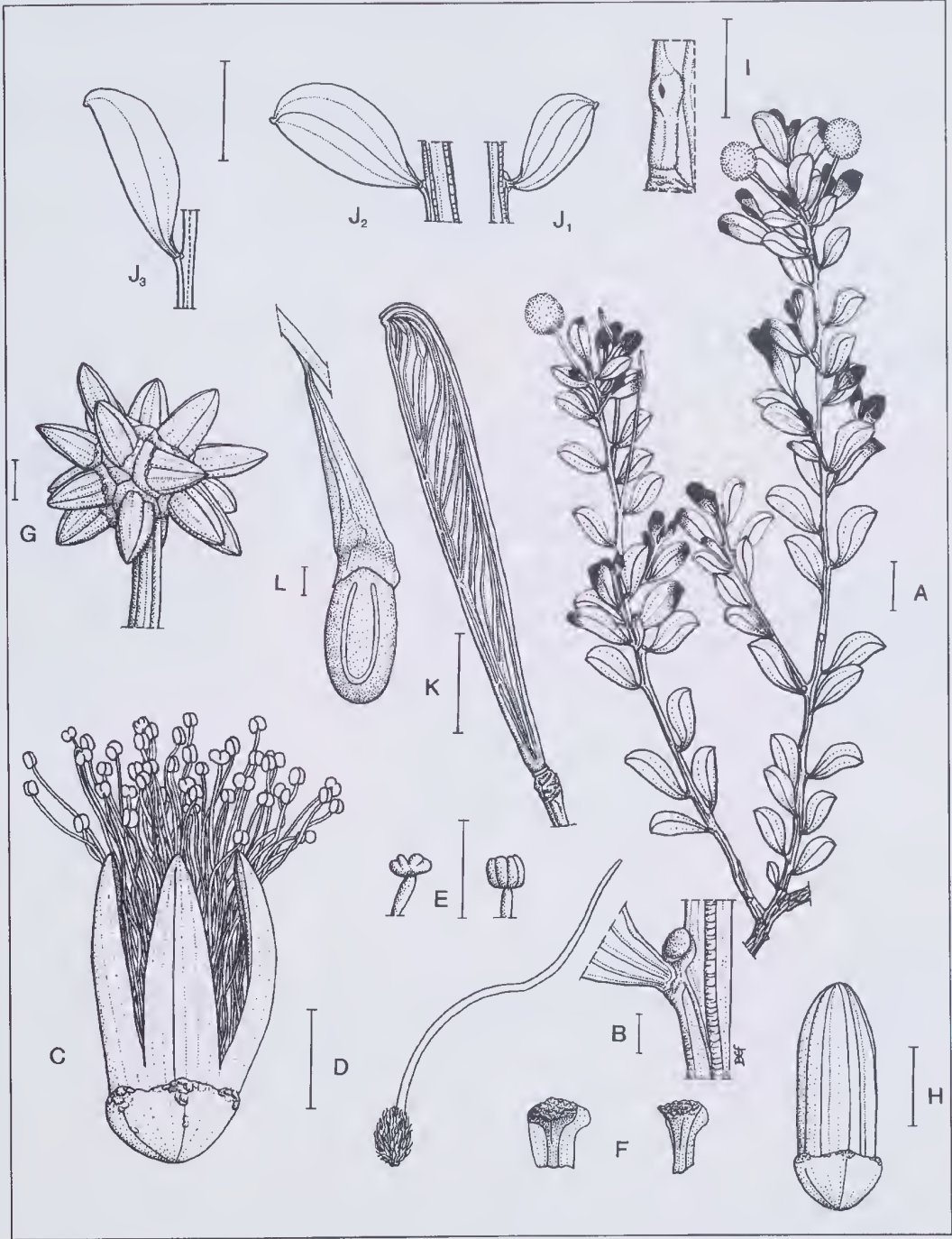


Figure 1. *Acacia stellaticeps*. A - branchlet with inflorescences; B - phyllode base and part of stem; C - flower; D - gynoecium; E - anthers; F - bracteoles; G - capitulum in bud; H - flower bud; I - phyllode basal gland; J<sub>1</sub>-J<sub>3</sub> phyllode; K - pod; L - seed. Scale bar for A, J, K = 1 cm, scale bar for B-D, F-I, L = 1 mm, scale bar for E = 0.5 mm. Drawn by Don Fortescue from Newman 708 (A-F, H-J<sub>1</sub>), Beard 4000 (G), Olsen 511 (J<sub>2</sub>), Ashby 4036 (J<sub>3</sub>) and Lullfitz 6222a (K,L).

26 km S of Rabbit Flat turnoff on Tanami Track, *D. Keith & B. Pellow* 126 (DNA, NSW, PERTH, SYD); 21 miles [33.8 km] NW of Granites, *J.R. Maconochie* 999 (BRI, DNA, K, MEL, NSW, NT, PERTH).

*Distribution.* Occurs in Western Australia from the north-west coast between Exmouth Gulf and Broome east across parts of the Great Sandy Desert to the Sturt Creek area and into Northern Territory in the Tanami area; recorded between 18°00'S and 23°30'S.

*Habitat.* Grows in red, sometimes clayey or stoney sand, over quartzite, limestone, laterite or ironstone, on hills, alluvial flats or sandplains, often on flats between parallel sand dunes as well as on sand ridges, in open savannah, scrub heath, grassland or shrubland, often with spinifex.

*Phenology.* Flowering recorded from February to September; mature pods collected in August to October and December.

*Etymology.* The species name refers to the star-shaped capitate heads when in bud.

*Variants and affinities.* There is a group of specimens collected from arid country in the Sturt Creek area, Western Australia, to The Granites–Rabbit Flat area, Northern Territory, representing a variant of *A. stellaticeps*. It occurs within, as well as east and south of, the eastern distribution range of typical *A. stellaticeps*, and is characterized by smaller, more compact flower heads (5–7.5 mm diam.) often containing a larger number of flowers (up to 35 per head) which are usually also smaller (corolla 1.5–1.9(2.5) mm long; calyx length similar to typical *A. stellaticeps*). Other flower characteristics (e.g. striated petals) and the phyllodes and pods appear to be the same as in the typical variant of *A. stellaticeps*. The small-flowered variant might prove to merit recognition as a subspecies but requires further investigation, for example with regard to the occurrence of both variants in the area of Wolf Creek Crater, Western Australia.

*Acacia stellaticeps* is related to *A. translucens* in the '*A. stigmatophylla* group', but is distinguished mainly by its prominently spreading, large flower buds, often larger flowers with striated petals, and a ± erect knob-like to conical mucro on the phyllodes (the apical mucro is initially flattened against the lamina margin in *A. translucens*). Also related to *A. nuperrima* Baker f. and *A. setulifera* Benth.

*Hybrids.* *Acacia stellaticeps* appears to hybridize with *A. arida* Benth. in the Roebourne–Wickham area (*K. Glennon* 196, PERTH) and *A. hilliana* Maiden near Eighty Mile Beach camping ground (*L. Thomson* LXT1172A & B, PERTH). *Acacia sphaerostachya* E. Pritz., from the Pilbara region, is probably a hybrid between *A. stellaticeps* and *A. ancistrocarpa* Maiden & Blakely; the two putative parents and *A. sphaerostachya* have been recorded as being sympatric in a few places.

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Bruce Maslin (PERTH) and Peter Wilson (NSW) provided valuable assistance during the preparation of this paper. Jim Grimes (MEL) kindly supplied information on the publication of *Acacia humilis*. We are grateful to PERTH for the loan of specimens.

### Reference

Tindale, M.D. (1980). Notes on Australian taxa of *Acacia* no. 7. *Telopea* 2: 113–125.